return to updates

More on the Golden Ratio

and the Fibonacci series

by Miles Mathis

A couple of years ago I wrote a long paper on the golden ratio, showing how the unified field caused a field constraint that could lead to the golden ratio in natural situations. I now have something important to add to that.

That paper was somewhat complex as a matter of influences and kinematics, but this one will be much simpler. I was looking at a simplified expression of the golden ratio today, one I wrote myself instead of getting it from the textbooks, and it led me in a somewhat different direction. The golden ratio is commonly written in terms of φ, which has the value 1.618. But it can also be written in terms of what is called the conjugate Φ, which has the value of .618.

Historically, that was the initial esoteric thing about the golden ratio: it was the number that had an inverse that was equal to 1 + itself.

1/.618 = 1.618

It was that curious equality that initially intrigued mathematicians, not any infinite surds or Fibonacci series or anything else. *Phi* is normally written in equation form as

$$1/\varphi = \varphi - 1$$

But if we write it in terms of the conjugate—as we should—it is

$$1/\Phi = \Phi + 1$$

As you see, that is the more natural way to write the first number equation above. If we then multiply both sides by Φ, it becomes

$\Phi^2 + \Phi = 1$

We do that not because we are really interested in the number $\Phi^2 = .382$, but simply to get rid of the ratio, allowing us to look at it more like a power series—or simply a power equation.

Now, the series form of the golden ratio—which leads to the Fibonacci series—is still interesting, and I am not here to overturn it or argue it down (I will confirm it below). But this simpler form may tell us something as well. I showed in that previous paper how we can look at the golden ratio as a field equation instead of a series, and we can look at this simpler expression as a field equation, too. If we let the number 1 represent "the whole field," then we see that the other side of the equation is giving us just two terms, not an infinite number of terms. This expression appears to be telling us that the whole field is made up of some subfield, and also of a second subfield that is the square of the first. This may be of interest to us, since it is what I found of my unified field. When the gravity field is changing by the square, the charge field is changing by the quad. Which means the charge field is the square of the gravity field, *as a matter of change*.

I *haven't* found that the energy of either field is the square of the other, notice. The charge force on a particle isn't the square or square-root of the gravity force. The square only applies to the field *changes*. Gravity falls off by the inverse square while charge is falling off by the inverse quad. Does this fact have anything to do with the golden ratio?

We are seeing that it does, which makes it curious that the golden ratio has never been connected to the inverse square law of physics. Even though no one before me had the two subfields as we do in my unified field, it seems someone should have noticed that the golden ratio concerns squares and square-roots. It would have been pretty easy to connect *phi* to the inverse square law, since *phi* and gravity both fall-off by the square.

And even without gravity, *phi* should have been tied to the sphere. Why? Because the surface area of the sphere also falls off by the square. Any real field *emitted* by a sphere would fall off by the square. That would include gravity or anything else.

$SA = 4\pi r^2$

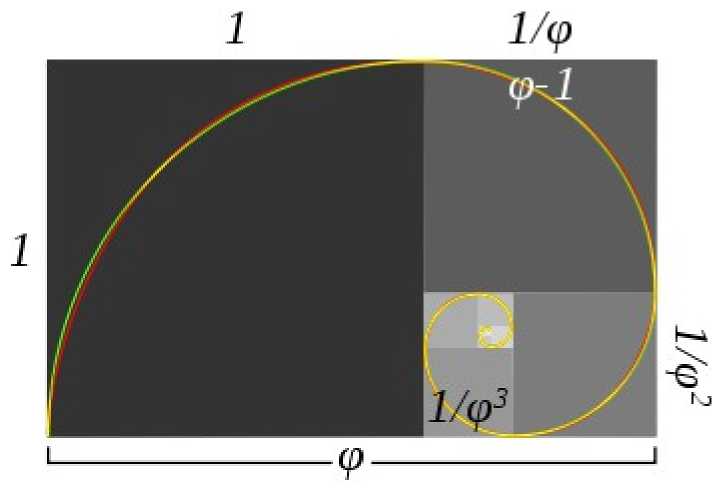
Now, it may be that others *have* made this connection, but it isn't reported in the mainstream literature. It isn't at Wikipedia, for instance, and it seems a thing worth reporting, if you have it in your briefcase.

I assume it isn't reported because no one has figured out how either the sphere or gravity can be the cause of the Fibonacci series in nature. The confirmed instances we see in nature don't seem to be the result of gravity or of spherical emission. For instance, although plants are in a gravity field, obviously, and this field is spherical, the field seems too big to explain the small changes we see. The gravity field of the Earth is very big, in other words, and curves very little. But the tendril is very small, and curves a lot. So the connection is not made.

However, my unified field gives us answers to both problems, and allows us to make the connection logically. It isn't the gravity field that is influencing the tendril, it is the charge field *inside* the gravity field. Since the charge field changes to the square of the gravity field, it changes very much faster. That is, it curves more over the same given distance. This allows it to explain smaller field changes like tendrils. The charge field is also a field of particles (photons), which allows us to track the real influence in the field. We already know that plants respond both to the light field and to the E/M field, so the mechanism is no longer mysterious.

In the same way, the spherical nature of the field is explained. It isn't the large sphere of the Earth that is emitting here, forcing us to follow the small local curvature of that field. It is the nucleus and the proton itself that is emitting the charge field, allowing us to explain Fibonacci curves down to the smallest sizes. The real curvature of the tendril is then explained by the diminishing influence of some *local* spherical charge field, probably one centered in the plant itself. Some local bundle of ions is creating a charge field, and we are seeing the natural fall-off with distance of that spherical bundle.

I will be told that the connection wasn't made because the Fibonacci series *doesn't* fall off by the square.



But it does if we analyze it correctly. I can show you how to do that straight from this mainstream diagram. Start by ignoring the largest box. The box with a side of 1 won't help us study squares since 1 squared is 1. We will look only at the second box and the third. Now, ignore the boxes and look only at the curves *in* those two boxes. You can see we have the quadrant of a circle in each. The length of the side of the box tells us the radius of the circle. The radius of the second box is $r = 1/\varphi$. The radius of the third box is $r = 1/\varphi^2$. I would call that an inverse square relationship. If we then compare box four directly to box three, we get the same relationship, and so on.* If we look at each box as a field component (or fractal) instead of as part of a series, we *do* have an inverse square fall-off.

In other words, the problem is they are writing and expressing the golden ratio as a series instead of a field. The Fibonacci *series* is actually the same as the unified *field*, and they both are based on the inverse square. Another way to say that is that they are writing the series as a series where each number is based on the *first* number in the series rather than as a series where each number is based on the *previous* number in the series. Notice that if you assign *any* box the length $1/\varphi$, the box below it is its square.

If you still don't follow me, look here:

$$\varphi = \sqrt{1 + \sqrt{1 + \sqrt{1 + \sqrt{1 + \cdots}}}}.$$

You can see *phi* falling off by the inverse square with your own eyes, by an equation called the infinite surd. That isn't my equation, that is Wikipedia's. That is written as a sum rather than as a series, allowing us to see the fall-off by inverse square. I will be told that is falling off by the square-root, but the square-root is the *inverse* of the square. Some have said I often seem to mistake the square-root for the inverse square. They aren't the same.

$1/r^2 \neq \sqrt{r}$

That's true in a lot of situations. You can't just substitute one for the other in an equation. However, if you are doing relative field calculations—as I often do—and you know you are in a field that varies by the square, you *can* us the square-root in your calculations. I have done that often in my papers on Bode's law, axial tilt, and others. There, I use it as an inverse field manipulation, not as a substitution for $1/r^2$. We are seeing a similar thing here with the infinite surd equation, which—by the way it is written—stands as a diminishing square rather than as a series.

You should also notice something else about the infinite surd. The basic term is $1 + \sqrt{1}$, which matches in field form our equation above $\Phi^2 + \Phi = 1$. In other words, what we see again is a field with two subfields, and one of the fields is the square root of the other. Because one field is *inside* the other field, we get this infinite regression when we write the field as a series. We are seeing clear evidence of the charge field inside the gravity field, creating the unified field.

How could so many people miss this? As usual, it is because they have too much math and too little mechanics. Instead of trying to *visualize* this as field mechanics, most people have been analyzing it as pure math. Most of the current and historical math not only doesn't help us see the field mechanics, it blocks it. And this example stands as a near-perfect indictment of modern physics, which has been hampered by a lack of visualization and physicality for at least two centuries. Since the Copenhagen Interpretation in the 1920's, it has been even worse, since visualization was no longer simply a rarity (due to the normal or average abilities of physicists); beginning with Bohr and Heisenberg, it was *outlawed*. Banned, *verboten, förbjudet*.

What this means is that the Fibonacci curve is just a sign of the charge field. The charge field falls off by the square inside the gravity field, creating this pattern of fall-off we see as the Fibonacci tendril. It curves rather than falling off in a line, because everything curves in the charge field. See my paper on the Coriolis effect, where I explain that curve. The Fibonacci tendril can best be understood as a field combination of the Coriolis effect and the inverse square law, both of which I have shown are caused by the charge field. The strength of the spherical charge field (which we call electrical when it moves ions) causes the fall-off, and the spin of the charge field (which we call magnetic) causes the curve.

If you don't understand what I mean by that last part, go back to the Fibonacci curve diagrammed above. Notice they turn the series 90° *by hand* in between each box. Meaning, they just turn it because it fits the tendril that way, not for any mechanical reason that they explain. If you ask them, "why are you turning the boxes each time?" They can only answer, "Because that gives us the pretty tendril." But they don't use some sort of righthand rule to justify it. They just do it. They can't use a righthand rule to explain it, because that would imply the tendril has something to do with E/M, and they don't go there. But I do. The curve actually *is* related to the righthand rule, and this motion *is* related to the E/M field. Both are caused by the charge field, by the same fundamental mechanics.

I consider this paper to be a complement to my earlier paper, not a replacement for it. But I will admit that this paper is far easier to digest. This paper is a refinement and simplification of the fields described there, and should appeal to those who want just the barebones, with extreme clarity but very little exhaustiveness (or exhaustion). That first paper was better at explaining how charge causes the $(a + b)/a = a/b$ relationship and the parameters of celestial bodies like the Moon. This paper is better at explaining the Fibonacci series.

*We know that box 4 is to 3 as 3 is to 2, so if there is an square relationship between 3 and 2, there is a square relationship between them all. The reason we don't find that square relationship between box 1 and 2 is that box 1 is arbitrarily assigned the number 1. But our series is not based on the number 1, it is based on the number .618. That is why box 2 is our foundation, not box 1. This is also why we don't find a square relationship between box 4 and 3, with the given numbers. The given numbers are written as functions of 1, not of .618. In other words, if we divide $1/\varphi^2$ by $1/\varphi^3$, we don't find a square. But again, that is because the series is not a function of $1/\varphi^2$. It is a function of $1/\varphi$. So the only relationship that will directly tell us that the series IS based on the square law is the relationship between 3 and 2, as I showed.